

Ex. A, Convolve's Rebuttal Invalidity Report at p. 23 (emphasis added). Convolve is misapplying the Court's construction, ignoring both the word "comprising" in the construction and the functional language of the construction, in order to preserve Convolve's infringement case.

I. Background

The Court construed "data storage device" as:

a device for storing data *comprising* a magnetic disk and a disk drive head wherein the disk drive head is operative to move across the surface of the disk and read and write data.

Claim Construction Order at 22 (emphasis added). Under well-accepted patent law principles, the word "comprising" is an open-ended term that indicates that the claim term encompasses all the listed elements, but may also include additional, unnamed elements. *See, e.g., Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) (holding that "[c]omprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim."); MPEP 2111.03 ("The transitional term comprising . . . is inclusive or open-ended and does not exclude additional, unrecited elements or method steps.") Nothing in this Court's Claim Construction Order indicates that the common meaning of "comprising" does not apply to the Court's construction of "data storage device."

The assistance of the Court on this issue is necessary. According to Convolve, the word "comprising" in the Court's construction of "data storage device" is limiting, not open ended, and the "data storage device" term includes some, but not all, of the components of the data storage device in the accused products. Importantly, Convolve is now interpreting the Court's construction to exclude, in all circumstances, the internal processor of the disk drive from the scope of the "data storage device." Thus, whether the term "data storage device" can

include the internal processor of the disk drive is an issue of claim scope for resolution by the Court. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co. Ltd.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.”).

Convolve has adopted its strained and incorrect claim construction position for an obvious reason. Claims 7-10, 14, and 15 of the patent-in-suit require that a processor send a shaped input signal *to* a data storage device. In order to advance its infringement case, Convolve is attempting to arbitrarily chop a disk drive into pieces so that a first piece, which Convolve now labels as the “data storage device,” can receive shaped input signals that are sent from the second piece, which is the internal processor of the same disk drive. Unless Convolve can chop the accused disk drives into pieces so that the internal processor of the disk drive is no longer part of the “data storage device,” Convolve cannot show that shaped input signals are sent *to* the data storage device.

In Dell’s accused computers, the internal processor that allegedly sends the shaped input signals is an integrated component of the disk drive and necessarily forms part of the “data storage device” under the Court’s construction. The magnetic disk, the disk drive head, and the internal processor all form the data storage device as that device is manufactured by third parties and shipped to Dell. Convolve, however, is desperate for an understanding of the Court’s construction of “data storage device” that creates an imaginary box around the magnetic disk and disk drive head and puts the internal processor outside this box. Convolve’s box-drawing is inconsistent with the Court’s construction of “data storage device, inconsistent with the ordinary meaning of “comprising,” and inconsistent with the plain and ordinary meaning of “data storage device” as used in claims and specification of the ‘473 patent. The Court should clarify that the

term “comprising” has its ordinary, non-limiting meaning, and that a data storage device includes the internal components that cause a disk drive to function, including any internal processor that allows the disk drive to store data and for the head to move across the surface of the disk and read and write data.

II. Argument

A. The Court’s Construction of Data Storage Device Did Not *Exclude* an Internal Processor.

Despite Convolve’s current thinking, this Court did not construe “data storage device” to *exclude* the internal processor that is an integral part of the disk drive. The Court’s use of the word “comprising” confirms that the Court did not intend to uniformly and in all instances exclude an internal processor from being part of a “data storage device.” The Court’s construction uses the word “comprising” to define what the data storage device must include *at a minimum*. The Court’s construction, however, does not limit the components that may be included in a “data storage device.” If a data storage device includes more components than a head and a disk, the device is still a data storage device.

Had the Court intended to limit the scope of the term to just the head and the disk, as Convolve now asserts, the Court could have easily done so by not using the word “comprising” and stating that a data storage device “consists of” or “is” a head and a disk. *See* MPEP 2111.03 (stating that “consisting of” normally “excludes any element, step, or ingredient not specified in the claim.”) Although the Court did not *require* that a data storage device include a processor, the Court did not hold that a data storage device *could never* include a processor. If the disk drive includes an internal processor that is integral to the function of the disk drive, including the functions of storing data and causing the head to move across the surface of the disk and read and write data, then the “data storage device” necessarily includes

the internal processor. Any other construction by Convolv that excludes functional components from the scope of “data storage device” is nothing more than the arbitrary drawing of imaginary boxes that have no basis in the claim terms, the Court’s construction, the specification, or common sense.

Indeed, Convolv does not and cannot dispute that the word “comprising” means that a data storage device may have components *in addition to* a disk and a head. In its most recent set of proposed amended infringement contentions, Convolv itself takes advantage of the term “comprising” in the Court’s construction to contend that the “data storage device” also includes (a) the arm that is coupled to the head; (b) the spindle that rotates the disks; and (c) the actuator (motor) that moves the arm. Convolv explained that the scope of “data storage device” extends beyond the head and the disk to include the actuator (motor) of the disk drive:

[T]he processor/controller of the accused products is on a printed circuit board (“PCB”) which is attached to and sold with the head disk assembly (“HDA”). The HDA is a data storage device under the Court’s construction. The processor/controller on the PCB outputs shaped commands which go to the actuator of the HDA/data storage device. In other words, the processor/controller on the PCB outputs shaped commands to the data storage device.

Ex. A, February 23, 2011 e-mail from Convolv’s counsel concerning proposed amended infringement contentions (with Convolv’s additional “data storage device” components highlighted). Notice how Convolv’s effort to pull other components under the “data storage device” tent includes Convolv’s arbitrary list of integrated and functional components but tellingly excludes the most central, integrated, and necessary component of all — the internal processor. Convolv’s rebuttal expert report on invalidity takes the same arbitrary approach, referring to only the disks, heads, arm, and motors as the “data storage device,” but improperly excluding the internal processor — without which the other components will not work — from the scope of the term “data storage device”:

The HDA consists of the magnetic disk(s), head(s), **actuator arm**, **VCM (or stepper motor)**, and **spindle motor**. These components are enclosed in a sealed case to maintain cleanliness. The HDA is the essence of the disk drive, and for purposes of this litigation, based on the Court's Markman Order, is the data storage device in the claims of the '473 Patent.

Ex. B, Convolv's Rebuttal Invalidity Report at p. 23 (with Convolv's additional "data storage device" components highlighted).

Convolv should not be allowed to have it both ways. When applying "data storage device" to the accused device, Convolv uses "comprising" to include components within the "data storage device" when doing so helps Convolv's infringement position. When the ordinary meaning of "comprising" hurts Convolv's infringement position, Convolv draws an arbitrary box within the interior of the disk drive to exclude the internal processor from the data storage device.

No legal or grammatical basis exists for Convolv's arbitrary box drawing. Nor does the claim language or the specification contain any statements that would allow for construing the scope of the term "data storage device" to include internal motors, while excluding the component (the internal processor) that controls the entire drive, including the head, disk, and motors. Both the motors and the internal processor are within the interior of, and essential to the operation of, the disk drive. Both the motors and the internal processor function to store data in the disk drive, and both the motors and the internal processor are necessary for the head to move across the surface of the disk and read and write data. Convolv's box-drawing and exclusion of the internal processor should be rejected. The Court should clarify that its definition of "data storage device" does not exclude additional internal components that cause a disk drive to function, such as an internal processor that is necessary for the disk drive to store data and for the head to move across the surface of the disk and read and write data.

B. The Court Construed “Data Storage Device” in Terms of its Function and Did Not Limit the Construction to Two Subcomponents

The Court defined a “data storage device” by describing its function. A “data storage device” is a “device for storing data” and the head must be “operative to move across the surface of the disk and read and write data.” Claim Construction Order at 22. If the Court had intended to limit the term “data storage device” to just two components (the disk and the head), the Court would not have defined the term by its function. Because the construction includes a function, the construction recognizes that, standing alone and by themselves, the magnetic disk and disk drive head cannot “stor[e] data” and the head is not “operative to move across the surface of the disk and read and write data.”

As an example, if a person were to hold a disk in one hand and a head in the other, then that person would not qualify as a data storage device: the head would not be operative to move across the surface of the disk and read and write data. To be operative (*i.e.*, have force and effect), a processor must direct the head to move across the surface of the disk and read and write data. Convolve also agrees that a disk drive will not function without an internal processor, and Convolve’s president and primary inventor, Neil Singer, testified on behalf of Convolve at a recent deposition:

Q: Is it your understanding that today the disk drives that Dell ships in its computer systems have an internal processor?

A: I believe that all of the drives from the time that we were working on disk drives to the present have had internal processors. I’m not aware of any, except for ones in the early days of computing before we worked on disk drives, that didn’t.

Q: If you were to take one of those disk drives in a Dell system, and cut out the internal processor, would that disk drive function?

A: No.

Ex. C, Singer 30(b)(6) Dep. 314:7-20, March 22, 2011. The Court should clarify that, if the internal processor is integral to the functions of the data storage device (*i.e.*, storing data and enabling the head to move across the surface of the disk and read and write data), the internal processor is part of the data storage device.

C. The ‘473 Patent Defines a Disk Drive as a Data Storage Device

The ‘473 patent defines a “data storage device” as a drive-level device. The patent is devoid of any suggestion that a carefully circumscribed set of subcomponents in a disk drive can be characterized as a data storage device by themselves. Indeed, the ‘473 patent states exactly the opposite. The ‘473 patent explains without any reservation that *a disk drive is a data storage device*:

Moreover, although the invention has been described in the context of computer disk drives, it may apply equally to other types of *data storage devices (of which a computer disk drive is one)*, including, but not limited to, optical drives, tape drives, dual-actuated disk drives, and holographic storage devices which read from, and write to, data storage media other than magnetic disks.

Ex. D, Col. 43:1-7 (emphasis added). The Court cited this broad definition in its claim construction order (Dkt. No. 211, “Order”) at page 21 where the Court recognized that a disk drive *is* a data storage device. The Court also noted:

The patent addresses noise associated with the operation of data storage devices and specifically addresses the seek noise of disk drive data storage devices. Order at 1.

The patent-in-suit relates to control methods for data storage devices, specifically hard disk drives. Order at 2.

The patent-in-suit deal principally with audible noise generated by data storage devices, specifically the seek noise of hard disk drives. Order at 3.

The Court and the patentee both understand that a disk drive *is* a “data storage device,” and that a data storage device is not an arbitrary subset of subcomponents selected by Convolve to conform

to its infringement theories. Because a data storage device is a drive-level device, a data storage device necessarily includes all of the internal components of the disk drive that cause the disk drive to function as a disk drive, including any internal processor that is included in the disk drive.

D. The Court's Finding that the Patent Does Not Disclose a Disk Drive with an Internal Processor is Incorrect

Finally, to the extent that the Court believes that the construction of “data storage device” is limiting and excludes an internal processor, Dell respectfully submits that such a limiting construction is based on an erroneous finding in the claim construction order that the disk drive disclosed in the ‘473 patent does not include an internal processor. The ‘473 patent does disclose a disk drive with an internal processor. Accordingly, Dell respectfully requests that the Court clarify its ruling that disclosed disk drive of the ‘473 patent does not include an internal processor.

The disk drive of the ‘473 patent is identified as element 10, which is shown in both Figure 10A and Figure 10B: “Figs. 10A and 10B show close-up views of disk drive 10.” Ex. D, Col. 10:1. In each of Figures 10A and 10B, disk drive 10 is shown with an arrow that points to the entirety of the drawing. This arrow from “10” in Figures 10A and 10B is critical and unambiguously tells the reader that the entirety of each of Figure 10A and Figure 10B is a disk drive. It is well known that, in a drawing in a patent, an arrow “indicate[s] the entire section to which it points.” 37 C.F.R. 1.84(r)(1). Thus, in Figure 10B, the arrow for item 10 (the disk drive) points to all of Figure 10B, which is a view of the disk drive that shows internal processor 73. The Court’s claim construction order states that Figure 10A does not show a processor, but this is expected and not a surprise. Figure 10A is a side view of only one side of disk drive 10, and the processor of disk drive 10 is *on the underside* of the disk drive that is not shown in the

top view of Figure 10A. The processor is shown in Figure 10B, but not in Figure 10A. Convoke agrees that disk drive 10 includes an internal processor 73, as Convoke explained in the claim construction hearing:

The Court: Where is processor 73 located?

Convoke: Processor 73 is on the disk drive. The figure that's on the screen, Your Honor, is described -- Figure 10B is described as a close-up view --

The Court: Of the disk drive.

Convoke: -- of the disk drive. Processor 73 is indisputably on the disk drive.

Ex. E, Transcript at 13:25-14:8 (Dkt. No. 198). Convoke correctly stated at the claim construction hearing that disk drive 10 of the patent includes an internal processor, as described at the top of column 10 and as shown in Figures 10A and 10B.

The Court's claim construction order also concludes in the following passage that that item 10B is a drawing of the disk drive *engine* and therefore does not show a processor:

Instead, the patentee described a processor *dedicated* to a disk drive as a possible embodiment or part of a possible embodiment of processor 73 depicted in Figure 10B, the disk drive engine.

Order at 22 (emphasis in original). Figure 10B, however, is not a drawing of the disk drive *engine*. The "disk drive engine" is never identified in the patent as "10B." The disk drive engine is a piece of software and is item 16, as shown in Figure 2 and described in column 10. Thus, the Court's finding that Figure 10B is a depiction of a "disk drive engine" is not accurate. Figure 10B is a depiction of disk drive 10, which includes an internal processor 73. Thus, to the extent that the Court's construction is based on an understanding that the patent does not show a processor within a disk drive, Dell respectfully requests that the Court clarify that conclusion in view of (a) the statement at the top of column 10 describing Figures 10A and 10B as views of a

disk drive; and (b) the depiction of disk drive 10 in Figure 10B, including the arrow for disk drive 10 that points to the entirety of the disk drive, including internal processor 73.

III. Conclusion

For the foregoing reasons, Dell respectfully requests that the Court clarify that the data storage device includes the internal components that cause a disk drive to function, including any internal processor that is necessary for the disk drive to store data and for the head to move across the surface of the disk and read and write data.

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing document was filed electronically on March 30, 2011 pursuant to Local Rule CV-5(a) and has been served on all counsel who are deemed to have consented to electronic service.

/s/ Roger Fulghum
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CERTIFICATE OF CONFERENCE

In accordance with Local Rule CV-7(h), Tammy Pennington Rhodes, counsel for Dell Inc., conferred in good faith with Anna C. Halsey, counsel for Convoke, Inc., during a meet and confer on March 18, 2011. Counsel for Convoke has indicated that it is opposed to this motion.

/s/ Tammy Pennington Rhodes
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